

CLAIMS

1. A method for bending a blade member (1) in the width direction by deforming the blade member (1) having a blade point (12) at an end edge in the width direction into warp in the width direction, wherein

thickness-deviating process of pressing and flowing material of the blade member (1) to at least one side of a portion which front end edges (41, 51) bite into through an operation of making said front end edges (41, 51) narrowed linearly as they go to the front ends, and equipped on dies (4, 5), invade and bite into a portion near a blade point (12) of the blade member (1) is carried out at plural positions in the length direction on both faces of said blade member (1) so as to deform the blade member (1) at the thickness-deviating process portions into warp in the width direction.

2. The method for bending a blade member according to claim 1 wherein said thickness-deviating process is carried out with the linear shape of said front end edges (41, 51) meeting the width direction of said blade member (1).

3. The method for bending a blade member according to claim 1 wherein in said thickness-deviating process, the biting amount of the front end edges (41, 51) of the dies (4, 5) to the blade member (1) is increased gradually at a portion nearer the blade point (12) of the blade member (1).

4. The method for bending a blade member according to claim 1 wherein after a specified portion in the length direction of the belt-like blade member (1) having a blade point (12) at an end edge in the width direction is bent to a desired shape, said thickness-deviating process is carried out to the blade member (1).

5. The method for bending a blade member according to claim 1 wherein said thickness-deviating processed portion is moved successively in one direction of the length direction of the blade member (1).

6. The method for bending a blade member according to claim 1 wherein said dies (4, 5) are disposed on both sides across the blade member (1) such that they are capable of moving relative to each other in the direction of approaching/breaking away and by approaching the dies (4, 5) relative to each other, said thickness-deviating process is carried out to both sides of the blade member (1) at the same time.

7. The method for bending a blade member according to claim 1 wherein a target for this method is such a blade member (1), in which slit-like cutouts (11) long in the width direction are provided at plural positions at an interval in the length direction and the dimension between a cutout end (13) at a cutout forming position and the end edge in the width direction of the blade member (1) is shorter than the width at a portion in which the cutout (11) is not formed.

8. A device for bending a blade member in the width direction of a blade member (1) by deforming the blade member (1) having a blade point (12) at an end edge in the width direction to warp in the width direction, comprising:

a pair of dies (4, 5) disposed on both sides across a belt-like blade member (1) such that they are capable of moving relative to each other in the direction of approaching/breaking away; and

front end edges (41, 51) narrowed linearly as they go to the front ends, disposed on these dies (4, 5) and meeting each other in the width direction of

the blade member (1).

9. The device for bending a blade member according to claim 8 wherein the thickness-deviating process of pressing and flowing material of the blade member (1) to at least one side of a portion which said front end edges (41, 51) bite into through a biting operation of making said front end edges (41, 51) invade and bite into a portion near the blade point (12) of the blade member (1) by moving the pair of said dies (4, 5) such that they approach each other, is carried out.

10. The device for bending a blade member according to claim 8 wherein said front end edges (41, 51) are so inclined that the biting amount of the front end edges (41, 51) to the blade member (1) in said thickness-deviating process increases more gradually at a portion nearer the blade point (12) of the blade member (1).